

REMARKS

The present application was filed on July 18, 2003 with claims 1-37. Claims 12-14, 24 and 28 have been amended, and claims 17-23 and 34-37 have been canceled without prejudice. Claims 1-16 and 24-33 are pending and claims 1 and 24 are the pending independent claims.

In the outstanding Office Action dated December 14, 2005, the Examiner: (i) rejected claims 12-14, 21-23 and 28 under 35 U.S.C. §112, second paragraph; (ii) rejected claims 17-20 and 34-37 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent Publication No. 2004/0125147 to Liu et al. (hereinafter “Liu”); (iii) rejected claims 1-3 and 9-11 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of U.S. Patent No. 6,937,210 to MacDonald (hereinafter “MacDonald”); (iv) rejected claims 4-8 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of MacDonald and U.S. Patent No. 4,575,722 to Anderson (hereinafter “Anderson”); (v) rejected claims 12-16 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of MacDonald and U.S. Patent No. 6,414,422 to Rafii et al. (hereinafter “Rafii”); (vi) rejected claims 21-23 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Rafii; (vii) rejected claims 24-29, 31 and 32 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Anderson; (viii) rejected claim 30 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Anderson and MacDonald; and (ix) rejected claim 33 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Anderson and Rafii.

With regard to the rejection of claims 12-14, 21-23 and 28 under 35 U.S.C. §112, second paragraph, Applicants have canceled claims 21-23 without prejudice and amended claims 12-14 and 28 to provide sufficient antecedent basis of the limitations in the claims. Accordingly, withdrawal of the §112 rejection of claims 12-14 and 28 is therefore respectfully requested.

With regard to the rejection of claims 17-20 and 34-37 under 35 U.S.C. §102(e) as being anticipated by Liu, Applicants have canceled claims 17-20 and 34-37 without prejudice. Accordingly, withdrawal of the §102(e) rejection of claims 17-20 and 34-37 is respectfully requested.

With regard to the rejection of claims 1-3 and 9-11 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of MacDonald, Applicants respectfully assert that the cited

combination fails to establish a prima facie case of obviousness under 35 U.S.C. §103(a), as specified in M.P.E.P. §2143, in that the cited combination fails to teach or suggest all the claim limitations. For at least this reason, a prima facie case of obviousness has not been established.

Independent claim 1 recites a method of providing a user interface for a computing device. A user input display is projected from a projector of the computing device onto a first surface. A user output display is projected from the projector of the computing device onto a second surface. The first surface and the second surface are disposed in different planes.

Liu discloses a device and method for generating a virtual keyboard and display. MacDonald discloses a system for projecting images on a sphere. The Examiner contends that the combination of Liu and MacDonald teaches or suggests all the limitations of independent claim 1. Applicants respectfully disagree.

Liu describes a keyboard and display that are generated on the same surface. MacDonald describes a system for projecting images with multiple projectors. Thus, the combination of Liu and MacDonald fails to disclose the projection of a user input display onto a first surface and a user output display onto a second surface from a single projector, where the first and second surfaces are disposed in different planes.

Dependent claims 2, 3 and 9-11 are patentable at least by virtue of their dependency from independent claim 1, and also recite patentable subject matter in their own right. Accordingly, withdrawal of the §103(a) rejection of claims 1-3 and 9-11 is respectfully requested.

With regard to the rejection of claims 4-8 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of MacDonald and Anderson, Applicants respectfully assert that the cited combination fails to teach or suggest all the claim limitations. Anderson discloses a helmet-mounted magneto-optic display, and fails to remedy the deficiency described above with regard to claim 1. Thus, the combination of Liu, MacDonald and Anderson fails to disclose the projection of a user input display onto a first surface and a user output display onto a second surface from a single projector, where the first and second surfaces are disposed in different planes. Dependent claims 4-8 also recite patentable subject matter in their own right. Accordingly, withdrawal of the §103(a) rejection of claims 4-8 is respectfully requested.

With regard to the rejection of claims 12-16 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of MacDonald and Rafii, Applicants respectfully assert that the cited combination fails to teach or suggest all the claim limitations. Rafii discloses a method and apparatus for entering data using a virtual input device, and fails to remedy the deficiency described above with regard to claim 1. Thus, the combination of Liu, MacDonald and Rafii fails to disclose the projection of a user input display onto a first surface and a user output display onto a second surface from a single projector, wherein the first and second surfaces are disposed in different planes. Dependent claims 12-16 also recite patentable subject matter in their own right. Accordingly, withdrawal of the §103(a) rejection of claims 12-16 is respectfully requested.

With regard to the rejection of claims 21-23 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Rafii, Applicants have canceled claims 21-23 without prejudice. Accordingly, withdrawal of the §103(a) rejection of claims 21-23 is respectfully requested.

With regard to the rejection of claims 24-29 and 31-32 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Anderson, Applicants respectfully assert that the cited combination fails to establish a prima facie case of obviousness under 35 U.S.C. §103(a), as specified in M.P.E.P. §2143 in that the cited combination fails to teach or suggest all the claim limitations. For at least this reason, a prima facie case of obviousness has not been established.

Independent claim 24 recites a computing device comprising a projector that projects an image. The computing device further comprises a mirror system disposed in accordance with the projector. The mirror system reflects a portion of the image from the projector, projecting a nonreflected portion of the image to a first surface and a reflected portion of the image to a second surface. The first surface and the second surface are disposed in different planes. The projected reflected portion of the image and the projected nonreflected portion of the image provide a virtual user interface for the computing device.

The Examiner contends that the combination of Liu and Anderson teaches or suggests all the limitations of independent claim 24. Applicants respectfully disagree. The combination of Liu and Anderson fails to teach or suggest a mirror system in which a nonreflected portion of an image is projected to a first surface and a reflected portion of the image is projected to a second surface.

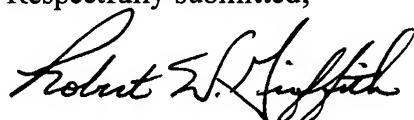
disposed in a different plane than the first surface. Dependent claims 25-29, 31 and 32 are patentable at least by virtue of their dependency from independent claim 24, and also recite patentable subject matter in their own right. Accordingly, withdrawal of the §103(a) rejection of claims 21-23 is respectfully requested.

With regard to the rejection of claim 30 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Anderson and MacDonald, Applicants respectfully assert that the cited combination fails to teach or suggest all the claim limitations. MacDonald fails to remedy the deficiency described above with regard to claim 24. Thus, the combination of Liu, Anderson and MacDonald fails to teach or suggest a mirror system in which a nonreflected portion of an image is projected to a first surface and a reflected portion of the image is projected to a second surface disposed in a different plane than the first surface. Accordingly, withdrawal of the §103(a) rejection of claim 30 is respectfully requested.

With regard to the rejection of claim 33 under 35 U.S.C. §103(a) as being unpatentable over Liu in view of Anderson and Rafii, Applicants respectfully assert that the cited combination fails to teach or suggest all the claim limitations. Rafii fails to remedy the deficiency described above with regard to claim 24. Thus, the combination of Liu, Anderson and Rafii fails to teach or suggest a mirror system in which a nonreflected portion of an image is projected to a first surface and a reflected portion of the image is projected to a second surface disposed in a different plane than the first surface. Accordingly, withdrawal of the §103(a) rejection of claim 33 is respectfully requested.

In view of the above, Applicants believe that claims 1-16 and 21-33 are in condition for allowance, and respectfully request withdrawal of the §112, §102(e) and §103(a) rejections.

Respectfully submitted,



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